



FIG. 1

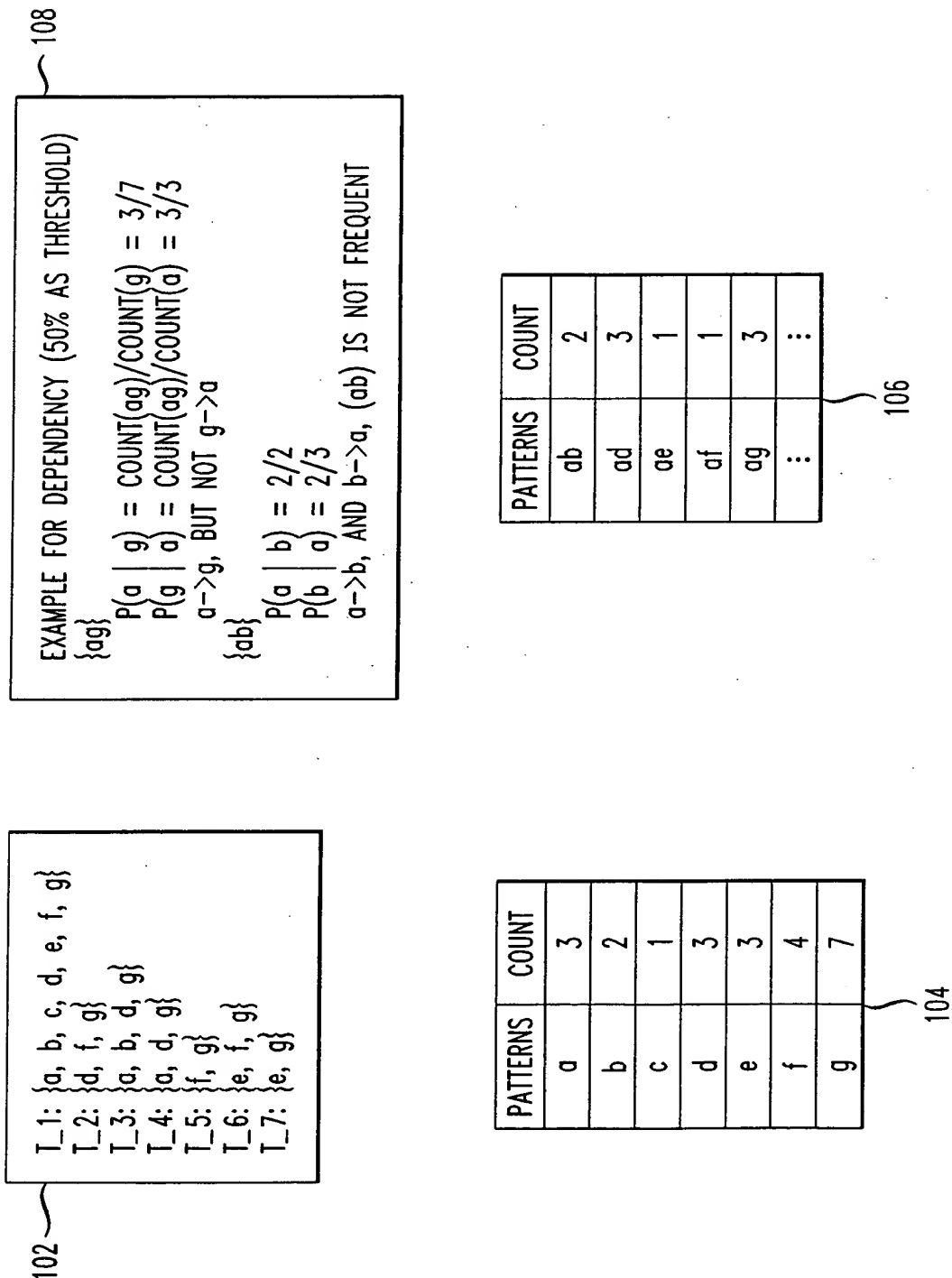




FIG. 2

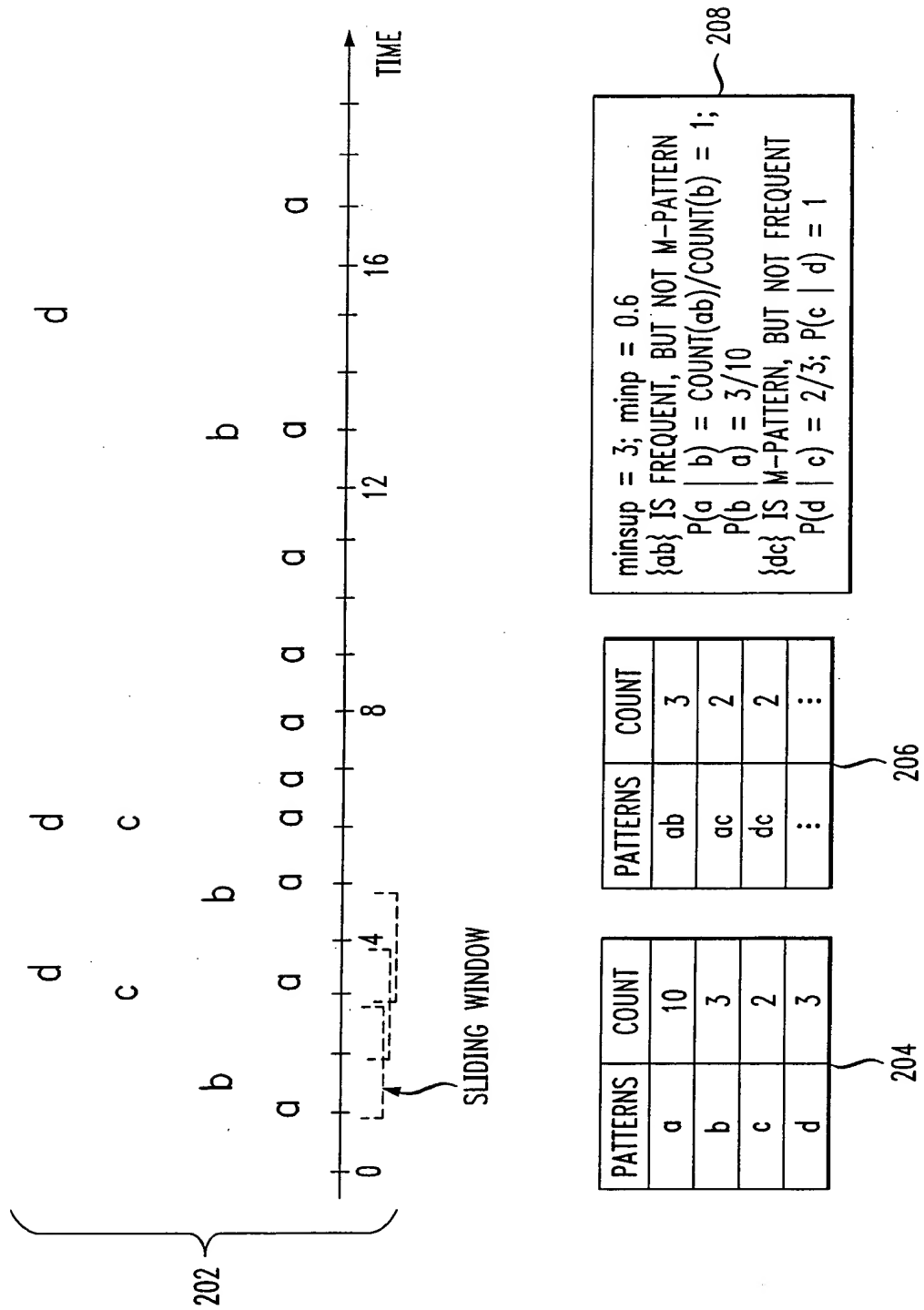


FIG. 3

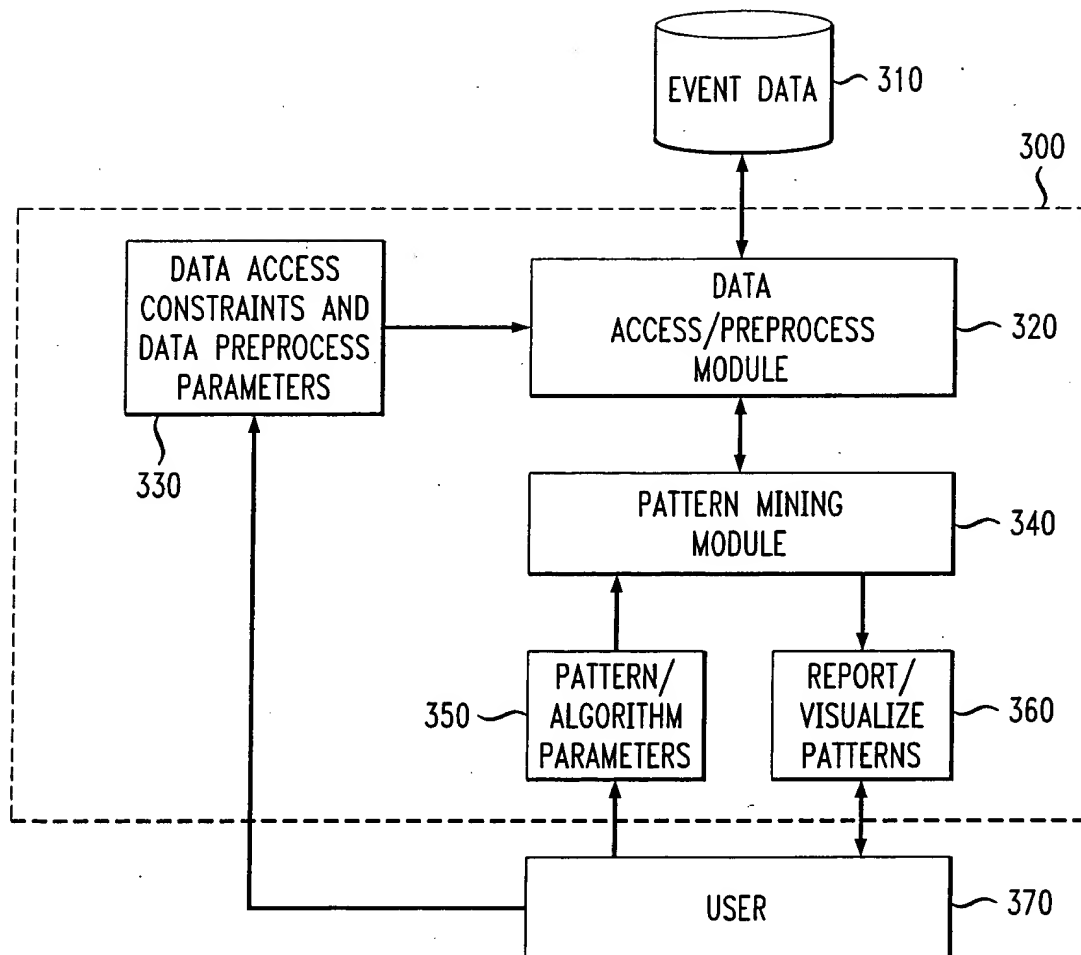
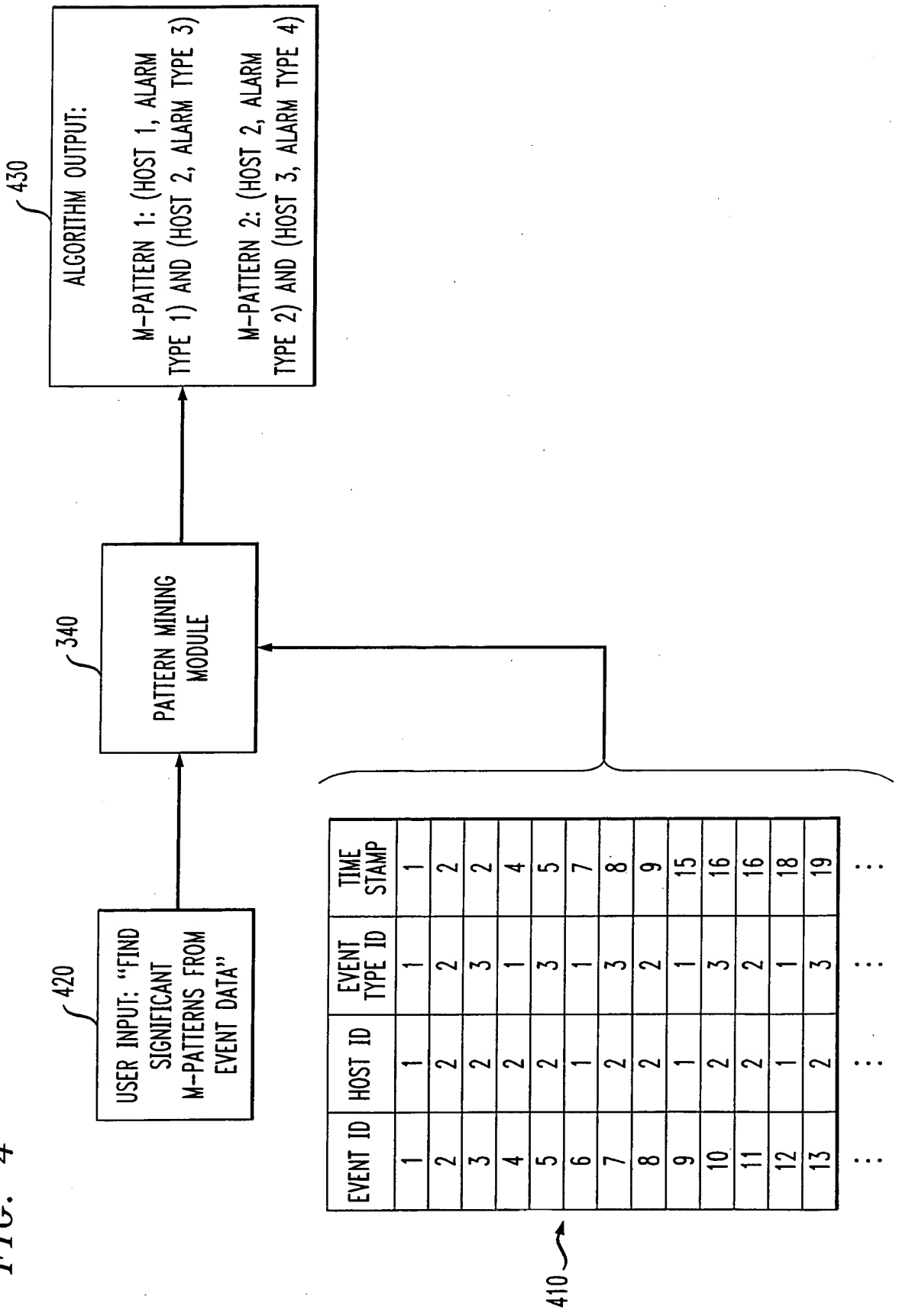


FIG. 4



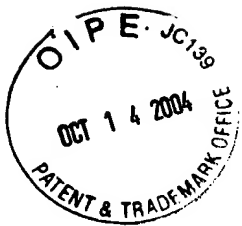


FIG. 5

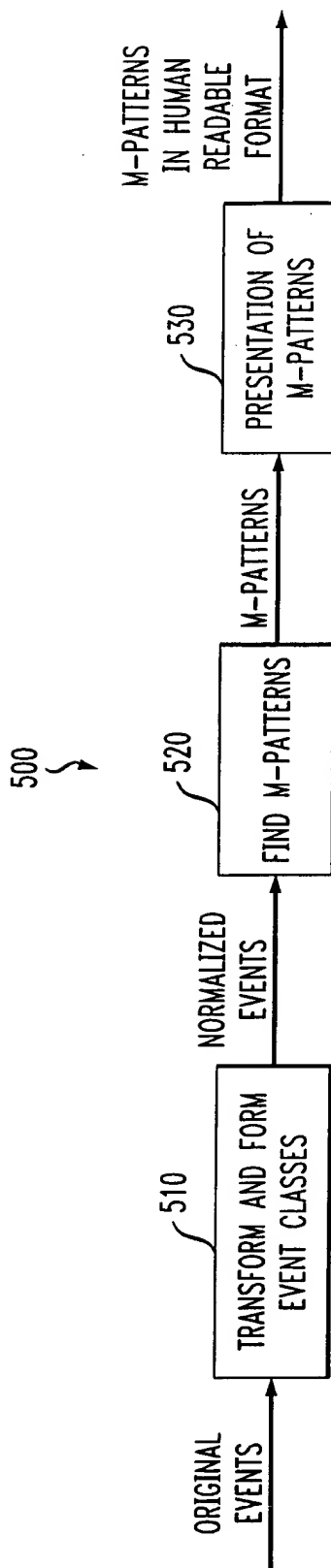


FIG. 6

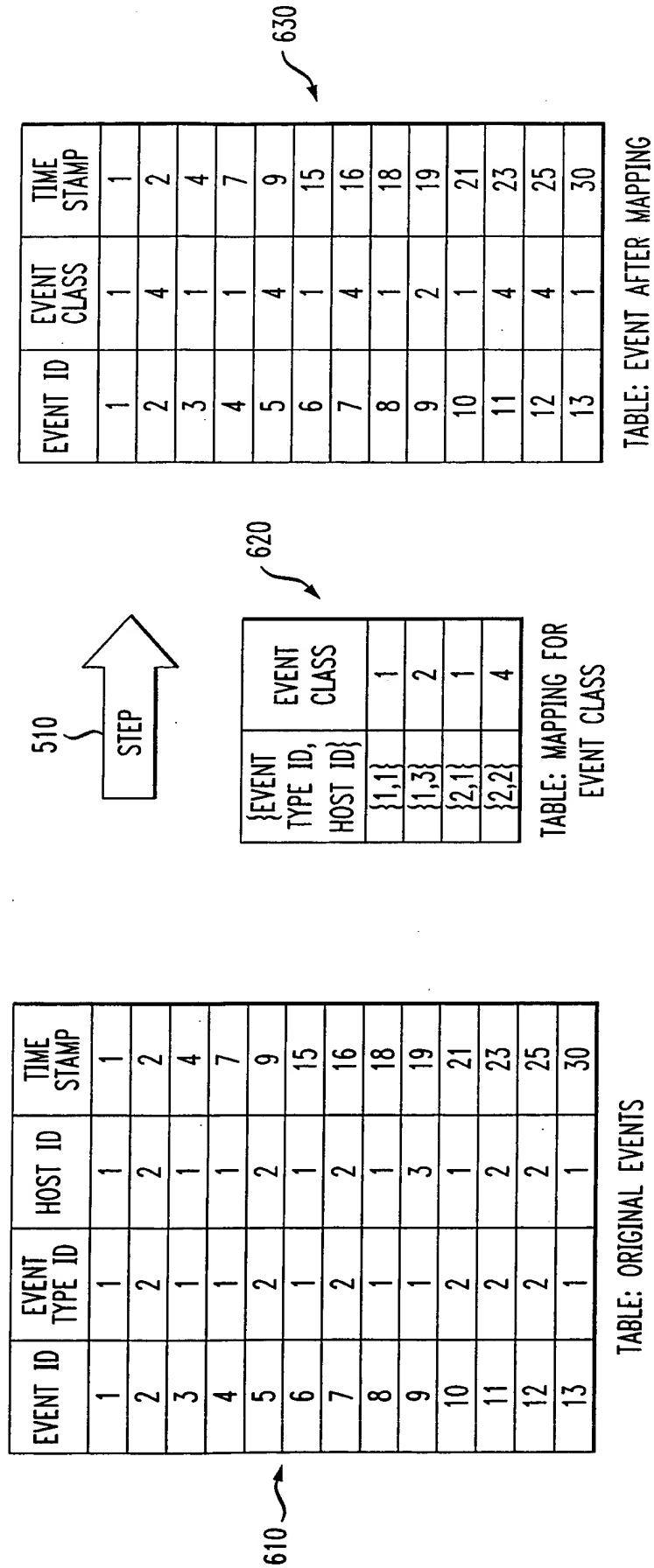


TABLE: ORIGINAL EVENTS



FIG. 7

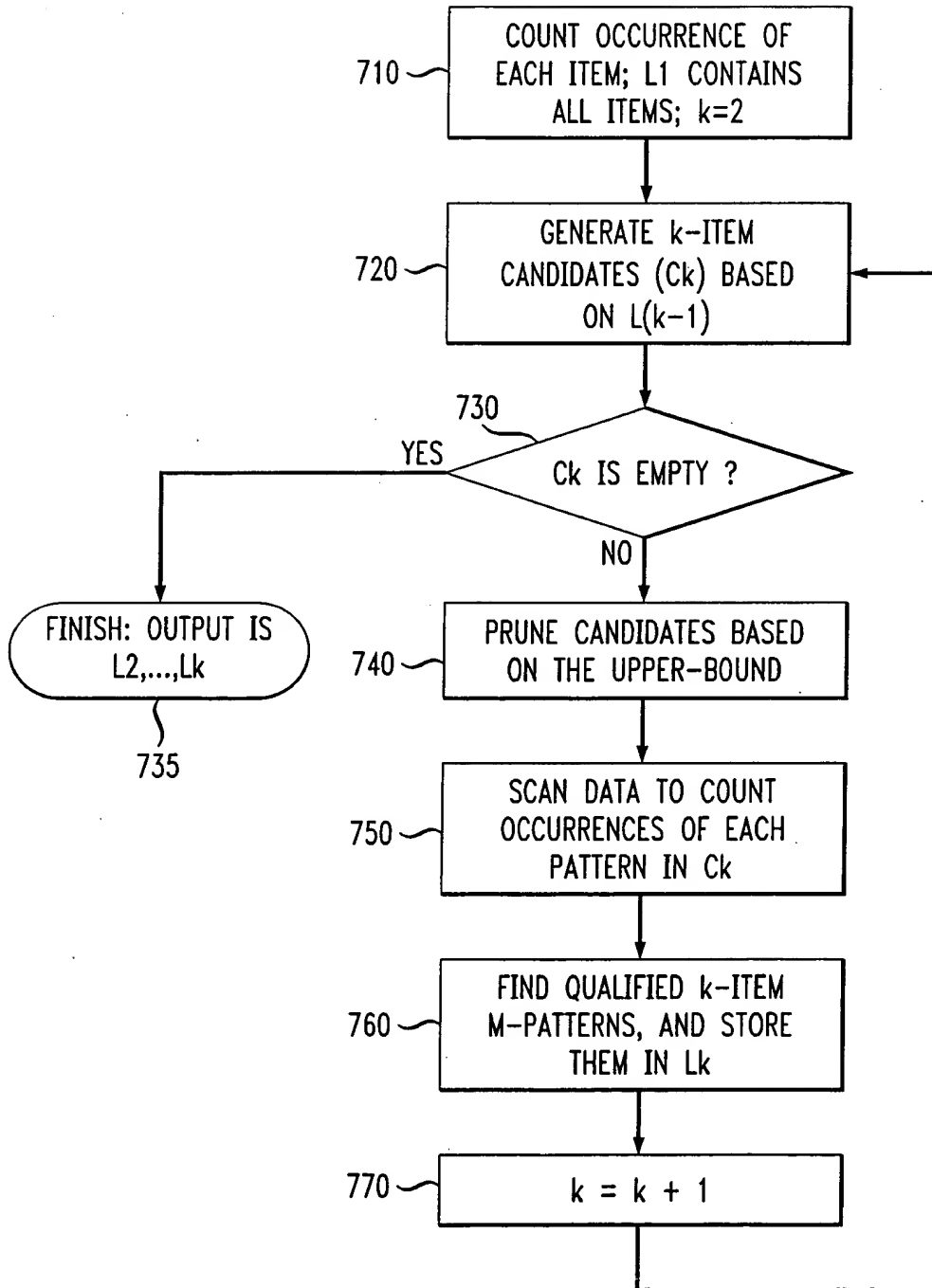




FIG. 8A

- INPUT: A SET OF CANDIDATES C_k , COUNT INFORMATION AT ALL PREVIOUS LEVELS, AND A THRESHOLD $minp$
- OUTPUT: A SET OF PRUNED CANDIDATES C'_k
- ALGORITHM
 - For each pattern pat in C_k
 - For each item a in pat
 - Compute: $prob = Count(pat-a)/Count(a)$;
 - if $prob < minp$
 - $C_k = C_k - pat$
 - break the for-loop
 - Return C_k

FIG. 8B

- INPUT: PATTERN pat , ALL COUNT INFORMATION, AND A THRESHOLD $minp$
- OUTPUT: TRUE IF pat IS A QUALIFIED M-PATTERN; OTHERWISE FALSE.
- ALGORITHM
 - For each a in pat
 - $prob = Count(pat)/Count(a)$
 - if $prob < minp$
 - return false
 - Return true
- This algorithm is $O(k)$

FIG. 9

